

DETAILED ACTION

Receipt is acknowledged of applicants': (a) amendment and remarks, filed on 12 April 2011 and (b) response to notice of non-compliant amendment, filed on 15 July 2011.

The claim objections and 35 USC 112, 2nd paragraph rejection are withdrawn in view of the amendment to the claims.

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Status of the Claims

In the response filed on 15 July 2011, claims 1-3, 6, 43, 44, and 54 have been amended. Claims 4, 5, 7-14, 16-20, 22, 23, 25-37, 39-42, and 45-53 have been cancelled. Claims 59-64 have been withdrawn. No claim is allowed. Claims 1-3, 6, 15, 21, 24, 38, 43, 44, and 54-58 are treated on the merits in this action. The following rejection is reiterated and constitutes the complete rejection presently being applied to the instant application.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-3, 6, 15, 21, 24, 38, 43, 44, and 52-57 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,865,852 ("Tamatani"), further in view of Proceedings of the New Zealand Society of Animal Production 63: 269-273 ("Hoskin"), further in view of Veterinary Parasitology 112 (2003) 147-155 ("Marley"), further in view of Journal of the Science of Food and Agriculture 81:467-484 ("Bais"), further in view of Food Chemistry 76 (2002) 139-147 ("Poli"), further in view of Skatole and Boar Taint (1998), Chapter 3 ("Borg"). (All cited references are currently of-record.)

Tamatani teaches an additive for stock feeds containing decomposition products of chicory roots, comprising the total content of polysaccharides and inulooligosaccharides of tri- and higher saccharides being 40% by weight and total solids content being 80% by weight (reading on the chicory product of claims 1, 43, and 44) (see abstract). Since the additive is for stock feeds, a person of ordinary skill in the art would understand that the animals will be eating the disclosed feed ad libidum, thus reading on the one day prior to slaughter of claim 1 and the two days and substantially until slaughter of claims 2 and 3. Since the animals will eat the feed ad libidum, and since the total content of polysaccharides and inulooligosaccharides of tri- and higher saccharides being 40% by weight and total solids content being 80% by weight (see abstract), or the oligosaccharides being 30-60% by weight (see col. 7, lines 16-17), the animals will get the at least 2.5% daily energy basis from the disclosed stock feed, as recited in claim 6. The chicory is processed by chopping, then heating and drying chicory roots in order to form chicory flakes, then grinding the chicory

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flakes (reading on the method of claims 43, 44, and 52) (see abstract). The heated and dried chicory flakes contain about 50.4% inulin, 0.9% fructose, 0.1% glucose, and 3.6% sucrose (reading on the inulin and low molecular sugar of claim 44) (see col. 4, lines 55-64).

Regarding claim 53, Tamatani teaches a heating temperature as low as 120 degrees C (see col. 4, line 32). A prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP 2144.05. Regarding claim 54, the product heated at this temperature for 8-24 hours (see col. 4, line 33) will inherently contain less than 10% water.

Tamatani explains that the disclosed method is beneficial in that it is effective to inhibit diarrhea in livestock (see col. 3, lines 30-31).

Regarding the secondary metabolite of claim 44, the terpenes of claim 56, and the sesquiterpene lactones of claim 57, these are inherently present in the chicory plant, as shown by Bais (see page 472 - including, inter alia, the lactucin and lactucopicin of claim 58). Bais further explains that inulin is inherently present in chicory plant (see page 473, right column).

Regarding the low molecular sugar and secondary metabolite of claims 44 and 55, the sesquiterpene lactone of claim 57 and the 8-deoxylactucin of claim 58, Poli explains that these ingredients are inherently present in the chicory root (see page 142, section 3.2.1.).

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Regarding the reduction of parasitic infections recited in claims 1 and 38, Hoskin and Marley explain that an animal diet comprising chicory has an antiparasitic effect upon the animal (see the abstracts of both references).

Regarding the reduction of skatole recited in claim 1, Borg explains that an animal diet comprising fructo-oligosaccharides (i.e. inulin) results in significantly lower levels of skatole in plasma (see Figure 13 and page 67, first full-paragraph). Borg further explains that there is an excellent correlation between concentration of skatole in blood plasma and concentration of skatole in back fat (see page 65, first full-paragraph).

Regarding claim 21 and 24, applicants' composition as claimed, contains the same components in the same configuration as the prior art. Properties are the same when the structure and composition are the same. In re Best, 195 USPQ 433.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to disclose a processed chicory product comprising at least one low molecular weight sugar and at least one secondary metabolite, as taught by Tamatani in view of Hoskin, further in view of Marley, further in view of Bais, further in view of Poli, further in view of Borg. One of ordinary skill in the art at the time the invention was made would have been motivated to make such a composition because it has anti-diarrheal effects, as explained by Tamatani, anti-parasitic effects, as explained by Hoskin and Marley, and reduces plasma and tissue skatole levels, as explained by Borg.

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Response to Arguments

Applicants' arguments filed on 12 April 2011 regarding the obviousness rejection have been fully considered but they are not persuasive.

Applicants argue that in the Tamatani reference, drying is performed below the boiling point of water and that roasting or cooking occur above 100 degrees C, resulting in a different product, such as differences in the content of various agents. See remarks, pages 7-8.

Examiner respectfully submits that the arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness."). See MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration. See MPEP § 2145.

It is noted that the Tamatani reference explicitly teaches a drying of the disclosed chicory product at least fifteen times (see abstract; col. 2, line 66; col. 3, line 4; col. 4, lines 18 and 21; col. 5, line 7; col. 6, line 55; col. 7, lines 11 and 13; claim 1; claim 6; and claim 10).

Additionally, Tamatani teaches "drying the chicory roots in an ordinary manner" as an alternative process (see col. 7, lines 11-13).

As such, examiner respectfully submits that Tamatani explicitly teaches a drying step as is currently claimed in the instant application.

Applicants argue that it is not obvious to reduce the processing temperature described by Tamatani as "optimal" because when processing plant material, short processing times are typically preferred. Applicants further argue that Tamatani teaches away from using lower temperatures because the reference states that when temperature is lower and heating time is shorter than those mentioned in the reference, the decomposition of inulin is insufficient. See remarks, page 8.

Examiner respectfully submits that while the range of 120-250 degrees disclosed by Tamatani is "preferred", disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). See MPEP 2123. Tamatani's general teaching is that "[t]he use of the product of the [sic] temperature and time as a guide means that if the temperature is high, the heating time should be short, and that if the heating time is long, the temperature should be low." See col. 4, lines 44-47. Thus, according to this teaching, a lower temperature may be used, so long as the heating time is long.

Applicants argue that short processing times are preferred because material begins to decompose during storage (see remarks, page 8); however, storage refers to longer time frames than the heating/drying step taught by Tamatani, even at lower temperatures.

Regarding applicants' suggestion that Tamatani teaches away from using lower temperatures, examiner respectfully disagrees with applicants' interpretation of the reference. In the section quoted by applicants, Tamatani states that lower temperature and shorter heating times result in insufficient decomposition of inulin. Tamatani goes on to state that the inverse is also true; i.e., higher temperatures and longer heating times result in negative effects (see col. 4, lines 39-43). However, these statements are consistent with Tamatani's general teaching that if the temperature is high then the heating time should be short and if the heating time is long, the temperature should be low (see col. 4, lines 43-47). Thus, Tamatani is not teaching away from using lower temperatures; rather, it is teaching that lower temperatures may be used, but they should be accompanied by longer heating times.

Applicants argue that the secondary references Hoskin, Marley, Bias, Poli, and Jensen do not repair the deficiencies of Tamatani. See remarks, pages 9-11

Examiner respectfully submits that these secondary references were cited merely as evidence to show that the various agents being claimed are inherent to chicory root.

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is

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filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HASAN AHMED whose telephone number is (571)272-4792. The examiner can normally be reached on 9am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax can be reached on (571)272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/H. A./

Examiner, Art Unit 1615